K032503

AUG 2 2 2003

HITACHI

Summary of Safety and Effectiveness

Device Description

The Hitachi EUB-5500 Diagnostic Ultrasound Scanner is a Track 3 Diagnostic Ultrasound Pulsed Doppler and Pulsed Echo Imaging System capable of the following operating functions:

- B Mode
- M Mode
- Pulsed Doppler
- Continuous Wave Doppler
- Color Flow
- Amplitude Doppler

It is also intended for Harmonic Imaging, Superficial Musculoskeletal Imaging, and 3D Imaging.

Safety

As a Track 3 ultrasound device, the Hitachi EUB-5500 Diagnostic Ultrasound Scanner complies with the *Standard for Real-Time Display of Thermal and Mechanical Acoustic Output Indices on Diagnostic Ultrasound Equipment (1992) – published by NEMA as UD-3.*

With respect to limits on acoustic outputs, the Hitachi EUB-5500 Diagnostic Ultrasound Scanner complies with the guideline limits set in the *510(k) Diagnostic Ultrasound Guidance – Revision: April 14, 1994.*

With regard to general safety, the Hitachi EUB-5500 Diagnostic Ultrasound Scanner is designed to comply with *IEC 606601-1 (1998) Medical Electrical Equipment, Part 1 – General Requirements for Safety.*

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
9200 Corporate Boulevard
Rockville MD 20850

AUG 2 2 2003

Hitachi Medical Corporation
% Mr. Doug Thistlewaite
Manager, Regulatory Affairs
Hitachi Medical Systems America, Inc.
1959 Summit Commerce Park
TWINSBURG OH 44087

Re: K032503
Trade Name: Hitachi EUB-5500 Ultrasound Scanner
Regulation Number: 21 CFR 892.1550
Regulation Name: Ultrasonic pulsed doppler imaging system
Regulation Number: 21 CFR 892.1560
Regulation Name: Ultrasonic pulsed echo imaging system
Regulation Number: 21 CFR 892.1570
Regulation Name: Diagnostic ultrasonic transducer
Regulatory Class: II
Product Code: 90 IYN, IYO, and ITX
Dated: August 6, 2003
Received: August 13, 2003

Dear Mr. Thistlewaite:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and we have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

This determination of substantial equivalence applies to the following transducers intended for use with the Hitachi EUB-5500 Ultrasound Scanner, as described in your premarket notification:

Transducer Model Number

EUP-B514
EUP-C514
EUP-C532
EUP-ES52M

EUP-F531
EUP-L53S
EUP-L54M
EUP-O53T
EUP-OL334
EUP-R54A-19
EUP-S50
EUP-TC3
EUP-U533
EUP-V53W

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

This determination of substantial equivalence is granted on the condition that prior to shipping the first device, you submit a postclearance special report. This report should contain complete information, including acoustic output measurements based on production line devices, requested in Appendix G, (enclosed) of the Center's September 30, 1997 "Information for Manufacturers Seeking Marketing Clearance of Diagnostic Ultrasound Systems and Transducers." If the special report is incomplete or contains unacceptable values (e.g., acoustic output greater than approved levels), then the 510(k) clearance may not apply to the production units which as a result may be considered adulterated or misbranded.

The special report should reference the manufacturer's 510(k) number. It should be clearly and prominently marked "ADD-TO-FILE" and should be submitted in duplicate to:

Food and Drug Administration
Center for Devices and Radiological Health
Document Mail Center (HFZ-401)
9200 Corporate Boulevard
Rockville, Maryland 20850

This letter will allow you to begin marketing your device as described in your premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus permits your device to proceed to market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801, please contact the Office of Compliance at (301) 594-4591. Additionally, for questions on the promotion and advertising of your device, please contact the Office of Compliance at (301) 594-4639. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). Other general information on your responsibilities under the Act may be obtained from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or at (301) 443-6597 or at its Internet address "http://www.fda.gov/cdrh/dsmamain.html".

If you have any questions regarding the content of this letter, please contact Rodrigo C. Perez at (301) 594-1212.

Sincerely yours,

for Nancy C. Brogdon
Director, Division of Reproductive,
Abdominal and Radiological Devices
Office of Device Evaluation
Center for Devices and Radiological Health

Enclosure(s)

DIAGNOSTIC ULTRASOUND INDICATIONS FOR USE FORM

System: EUB-5500

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation						
General (Track I only)	Specific (Tracks I & III)	B	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)
Ophthalmic	Ophthalmic							
Fetal Imaging & Other	Fetal	N	N	N	N	N	N	N
	Abdominal	Na,b	Na,b	Na,b	N	Na,b	Na,b	Na,b
	Intra-operative (Spec.)	Nc,d	Nc,d	Nc,d		Nc,d	Nc,d	Nc,d
	Intra-operative (Neuro.)	N	N	N		N	N	N
	Laparoscopic	N	N	N		N	N	N
	Pediatric	N	N	N	N	N	N	N
	Small Organ (Spec.)	Nd,e	Nd,e	Nd,e		Nd,e	Nd,e	Nd,e
	Neonatal Cephalic	N	N	N		N	N	N
	Adult Cephalic	N	N	N	N	N	N	N
	Trans-rectal	Nf,h	Nf,h	Nf,h		Nf,h	Nf,h	Nf,h
	Trans-vaginal	Ng	Ng	Ng		Ng	Ng	Ng
	Trans-urethral							
	Trans-esoph. (non-Card.)							
	Musculo-skel. (Convent.)	N	N	N		N	N	N
	Musculo-skel. (Superfic.)	N	N	N		N	N	N
	Intra-luminal							
	Other (spec.)							
Cardiac	Cardiac Adult	N	N	N	N	N	N	N
	Cardiac Pediatric	N	N	N	N	N	N	N
	Trans-esophageal (card.)	N	N	N		N	N	N
	Other (spec.)							
Peripheral Vessel	Peripheral vessel	N	N	N	N	N	N	N
	Other (spec.)							

N = new indication.

*Combination of each operating mode, B, M, PWD, CWD and Color Doppler.

**Amplitude Doppler, Harmonic Imaging and 3D Imaging.

Additional Comments:

Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures

Subscript "b": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures (including amniocentesis).

Subscript "c": Includes imaging of organs and structures exposed during surgery (excluding neurosurgery and laparoscopic procedures).

Subscript "d": Includes thyroid, parathyroid, breast, scrotum, penis.

Subscript "e": Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy.

Subscript "f": Includes imaging for guidance of transrectal biopsy.

Subscript "g": Includes imaging for guidance of transvaginal biopsy.

Subscript "h": Includes imaging for guidance of trans-perineal biopsy.

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

David A. Segerson

(Division Sign-Off)

Division of Reproductive, Abdominal, ~~ENT~~, and Radiological Devices

510(k) Number: K032503

DIAGNOSTIC ULTRASOUND INDICATIONS FOR USE FORM

System: EUB-5500
Transducer: EUP-B514

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation						
General (Track I only)	Specific (Tracks I & III)	B	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)
Ophthalmic	Ophthalmic							
Fetal Imaging & Other	Fetal	N	N	N		N	N	N
	Abdominal	Nb	Nb	Nb		Nb	Nb	Nb
	Intra-operative (Spec.)	Nc	Nc	Nc		Nc	Nc	Nc
	Intra-operative (Neuro.)							
	Laparoscopic							
	Pediatric							
	Small Organ (Spec.)							
	Neonatal Cephalic							
	Adult Cephalic							
	Trans-rectal							
	Trans-vaginal							
	Trans-urethral							
	Trans-esoph. (non-Card.)							
	Musculo-skel. (Convent.)							
	Musculo-skel. (Superfic.)							
	Intra-luminal							
	Other (spec.)							
Cardiac	Cardiac Adult							
	Cardiac Pediatric							
	Trans-esophageal (card.)							
	Other (spec.)							
Peripheral Vessel	Peripheral vessel							
	Other (spec.)							

N = new indication.
*Combination of each operating mode, B, M, PWD, CWD and Color Doppler.
**Amplitude Doppler and 3D Imaging.

Additional Comments:

Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
Subscript "b": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures (including amniocentesis).
Subscript "c": Includes imaging of organs and structures exposed during surgery (excluding neurosurgery and laparoscopic procedures).
Subscript "d": Includes thyroid, parathyroid, breast, scrotum, penis.
Subscript "e": Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy.
Subscript "f": Includes imaging for guidance of transrectal biopsy.
Subscript "g": Includes imaging for guidance of transvaginal biopsy.
Subscript "h": Includes imaging for guidance of trans-perineal biopsy.

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Concurrence of CDRH, Office of Device Evaluation (ODE)

(Division Sign-Off)
Division of Reproductive, Abdominal, ~~ENT~~,
and Radiological Devices

510(k) Number: K032503

DIAGNOSTIC ULTRASOUND INDICATIONS FOR USE FORM

System: EUB-5500
Transducer: EUP-C514

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation						
General (Track I only)	Specific (Tracks I & III)	B	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)
Ophthalmic	Ophthalmic							
Fetal Imaging & Other	Fetal	N	N	N		N	N	N
	Abdominal	Nb	Nb	Nb		Nb	Nb	Nb
	Intra-operative (Spec.)							
	Intra-operative (Neuro.)							
	Laparoscopic							
	Pediatric	N	N	N		N	N	N
	Small Organ (Spec.)	Ne	Ne	Ne		Ne	Ne	Ne
	Neonatal Cephalic							
	Adult Cephalic							
	Trans-rectal							
	Trans-vaginal							
	Trans-urethral							
	Trans-esoph. (non-Card.)							
	Musculo-skel. (Convent.)							
	Musculo-skel. (Superfic.)							
	Intra-luminal							
	Other (spec.)							
Cardiac	Cardiac Adult							
	Cardiac Pediatric							
	Trans-esophageal (card.)							
	Other (spec.)							
Peripheral Vessel	Peripheral vessel							
	Other (spec.)							

N = new indication.
*Combination of each operating mode, B, M, PWD, CWD and Color Doppler.
**Amplitude Doppler, Harmonic Imaging and 3D Imaging.

Additional Comments:

Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
Subscript "b": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures (including amniocentesis).
Subscript "c": Includes imaging of organs and structures exposed during surgery (excluding neurosurgery and laparoscopic procedures).
Subscript "d": Includes thyroid, parathyroid, breast, scrotum, penis.
Subscript "e": Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy.
Subscript "f": Includes imaging for guidance of transrectal biopsy.
Subscript "g": Includes imaging for guidance of transvaginal biopsy.
Subscript "h": Includes imaging for guidance of trans-perineal biopsy.

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Concurrence of CDRH, Office of Device Evaluation (ODE)

David A. Legumm
(Division Sign-Off)
Division of Reproductive, Abdominal, ~~ENT~~ & and Radiological Devices

510(k) Number: K032503

DIAGNOSTIC ULTRASOUND INDICATIONS FOR USE FORM

System: EUB-5500
Transducer: EUP-C532

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation						
General (Track I only)	Specific (Tracks I & III)	B	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)
Ophthalmic	Ophthalmic							
Fetal Imaging & Other	Fetal							
	Abdominal	N	N	N		N	N	N
	Intra-operative (Spec.)	N	N	N		N	N	N
	Intra-operative (Neuro.)							
	Laparoscopic							
	Pediatric	N	N	N		N	N	N
	Small Organ (Spec.)	Nd	Nd	Nd		Nd	Nd	Nd
	Neonatal Cephalic	N	N	N		N	N	N
	Adult Cephalic							
	Trans-rectal							
	Trans-vaginal							
	Trans-urethral							
	Trans-esoph. (non-Card.)							
	Musculo-skel. (Convent.)							
	Musculo-skel. (Superfic.)							
	Intra-luminal							
	Other (spec.)							
Cardiac	Cardiac Adult							
	Cardiac Pediatric							
	Trans-esophageal (card.)							
	Other (spec.)							
Peripheral Vessel	Peripheral vessel	N	N	N		N	N	N
	Other (spec.)							

N = new indication.
*Combination of each operating mode, B, M, PWD, CWD and Color Doppler.
**Amplitude Doppler and 3D Imaging.

Additional Comments:

Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
Subscript "b": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures (including amniocentesis).
Subscript "c": Includes imaging of organs and structures exposed during surgery (excluding neurosurgery and laparoscopic procedures).
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Subscript "f": Includes imaging for guidance of transrectal biopsy.
Subscript "g": Includes imaging for guidance of transvaginal biopsy.
Subscript "h": Includes imaging for guidance of trans-perineal biopsy.

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Concurrence of CDRH, Office of Device Evaluation (ODE)

David A. Legassa

(Division Sign-Off)
Division of Reproductive, Abdominal, ~~BNT~~, and Radiological Devices

510(k) Number: K032503

DIAGNOSTIC ULTRASOUND INDICATIONS FOR USE FORM

System: EUB-5500
Transducer: EUP-ES52M

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation						
General (Track I only)	Specific (Tracks I & III)	B	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)
Ophthalmic	Ophthalmic							
Fetal Imaging & Other	Fetal							
	Abdominal							
	Intra-operative (Spec.)							
	Intra-operative (Neuro.)							
	Laparoscopic							
	Pediatric							
	Small Organ (Spec.)							
	Neonatal Cephalic							
	Adult Cephalic							
	Trans-rectal							
	Trans-vaginal							
	Trans-urethral							
	Trans-esoph. (non-Card.)							
	Musculo-skel. (Convent.)							
	Musculo-skel. (Superfic.)							
	Intra-luminal							
	Other (spec.)							
Cardiac	Cardiac Adult							
	Cardiac Pediatric							
	Trans-esophageal (card.)	N	N	N	N	N	N	N
	Other (spec.)							
Peripheral Vessel	Peripheral vessel							
	Other (spec.)							

N = new indication.
*Combination of each operating mode, B, M, PWD, CWD and Color Doppler.
**Amplitude Doppler and 3D Imaging.

Additional Comments:

Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
Subscript "b": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures (including amniocentesis).
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Concurrence of CDRH, Office of Device Evaluation (ODE)

David A. Lyon

(Division Sign-Off)
Division of Reproductive, Abdominal, ~~ENT~~,
and Radiological Devices

510(k) Number: K032503

DIAGNOSTIC ULTRASOUND INDICATIONS FOR USE FORM

System: EUB-5500
Transducer: EUP-F531

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation						
General (Track I only)	Specific (Tracks I & III)	B	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)
Ophthalmic	Ophthalmic							
Fetal Imaging & Other	Fetal							
	Abdominal	N	N	N		N	N	N
	Intra-operative (Spec.)	Nc	Nc	Nc		Nc	Nc	Nc
	Intra-operative (Neuro.)	N	N	N		N	N	N
	Laparoscopic							
	Pediatric	N	N	N		N	N	N
	Small Organ (Spec.)	Nd	Nd	Nd		Nd	Nd	Nd
	Neonatal Cephalic	N	N	N		N	N	N
	Adult Cephalic							
	Trans-rectal	N	N	N		N	N	N
	Trans-vaginal	N	N	N		N	N	N
	Trans-urethral							
	Trans-esoph. (non-Card.)							
	Musculo-skel. (Convent.)							
	Musculo-skel. (Superfic.)							
	Intra-luminal							
	Other (spec.)							
Cardiac	Cardiac Adult							
	Cardiac Pediatric							
	Trans-esophageal (card.)							
	Other (spec.)							
Peripheral Vessel	Peripheral vessel	N	N	N		N	N	N
	Other (spec.)							

N = new indication.
*Combination of each operating mode, B, M, PWD, CWD and Color Doppler.
**Amplitude Doppler and 3D Imaging.

Additional Comments:

Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
Subscript "b": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures (including amniocentesis).
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Concurrence of CDRH, Office of Device Evaluation (ODE)

David G. Lyons

(Division Sign-Off)
Division of Reproductive, Abdominal, ~~ENT,~~ a
and Radiological Devices

510(k) Number: K032503

DIAGNOSTIC ULTRASOUND INDICATIONS FOR USE FORM

System: EUB-5500
Transducer: EUP-L53S

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation						
General (Track I only)	Specific (Tracks I & III)	B	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)
Ophthalmic	Ophthalmic							
Fetal Imaging & Other	Fetal							
	Abdominal	Nb	Nb	Nb		Nb	Nb	Nb
	Intra-operative (Spec.)	Nc	Nc	Nc		Nc	Nc	Nc
	Intra-operative (Neuro.)	N	N	N		N	N	N
	Laparoscopic							
	Pediatric	N	N	N		N	N	N
	Small Organ (Spec.)	Ne	Ne	Ne		Ne	Ne	Ne
	Neonatal Cephalic							
	Adult Cephalic							
	Trans-rectal							
	Trans-vaginal							
	Trans-urethral							
	Trans-esoph. (non-Card.)							
	Musculo-skel. (Convent.)	N	N	N		N	N	N
	Musculo-skel. (Superfic.)	N	N	N		N	N	N
	Intra-luminal							
	Other (spec.)							
Cardiac	Cardiac Adult							
	Cardiac Pediatric							
	Trans-esophageal (card.)							
	Other (spec.)							
Peripheral Vessel	Peripheral vessel	N	N	N		N	N	N
	Other (spec.)							

N = new indication.
*Combination of each operating mode, B, M, PWD, CWD and Color Doppler.
**Amplitude Doppler and 3D Imaging.

Additional Comments:

Subscript "a":	Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
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Concurrence of CDRH, Office of Device Evaluation (ODE)

David G Segraves

(Division Sign-Off)
Division of Reproductive, Abdominal, ~~ENT~~ &
and Radiological Devices

510(k) Number: K032503

Prescription Use (Per 21 CFR 801.109)

DIAGNOSTIC ULTRASOUND INDICATIONS FOR USE FORM

System: EUB-5500
Transducer: EUP-L54M

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation						
General (Track I only)	Specific (Tracks I & III)	B	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)
Ophthalmic	Ophthalmic							
Fetal Imaging & Other	Fetal							
	Abdominal	Na	Na	Na		Na	Na	Na
	Intra-operative (Spec.)	Nc	Nc	Nc		Nc	Nc	Nc
	Intra-operative (Neuro.)	N	N	N		N	N	N
	Laparoscopic							
	Pediatric	N	N	N		N	N	N
	Small Organ (Spec.)	Nd	Nd	Nd		Nd	Nd	Nd
	Neonatal Cephalic							
	Adult Cephalic							
	Trans-rectal							
	Trans-vaginal							
	Trans-urethral							
	Trans-esoph. (non-Card.)							
	Musculo-skel. (Convent.)	N	N	N		N	N	N
	Musculo-skel. (Superfic.)	N	N	N		N	N	N
	Intra-luminal							
	Other (spec.)							
Cardiac	Cardiac Adult							
	Cardiac Pediatric							
	Trans-esophageal (card.)							
	Other (spec.)							
Peripheral Vessel	Peripheral vessel	N	N	N		N	N	N
	Other (spec.)							

N = new indication.
*Combination of each operating mode, B, M, PWD, CWD and Color Doppler.
**Amplitude Doppler and 3D Imaging.

Additional Comments:

Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
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Concurrence of CDRH, Office of Device Evaluation (ODE)

David A. Legan

(Division Sign-Off)
Division of Reproductive, Abdominal, ~~ENT,~~ and Radiological Devices

510(k) Number: K032503

DIAGNOSTIC ULTRASOUND INDICATIONS FOR USE FORM

System: EUB-5500
Transducer: EUP-O53T

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation						
General (Track I only)	Specific (Tracks I & III)	B	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)
Ophthalmic	Ophthalmic							
Fetal Imaging & Other	Fetal							
	Abdominal							
	Intra-operative (Spec.)	Nc	Nc	Nc		Nc	Nc	Nc
	Intra-operative (Neuro.)							
	Laparoscopic							
	Pediatric							
	Small Organ (Spec.)							
	Neonatal Cephalic							
	Adult Cephalic							
	Trans-rectal							
	Trans-vaginal							
	Trans-urethral							
	Trans-esoph. (non-Card.)							
	Musculo-skel. (Convent.)							
	Musculo-skel. (Superfic.)							
	Intra-luminal							
	Other (spec.)							
Cardiac	Cardiac Adult							
	Cardiac Pediatric							
	Trans-esophageal (card.)							
	Other (spec.)							
Peripheral Vessel	Peripheral vessel							
	Other (spec.)							

N = new indication.
*Combination of each operating mode, B, M, PWD, CWD and Color Doppler.
**Amplitude Doppler and 3D Imaging.

Additional Comments:

Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures

Subscript "b": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures (including amniocentesis).

Subscript "c": Includes imaging of organs and structures exposed during surgery (excluding neurosurgery and laparoscopic procedures).

Subscript "d": Includes thyroid, parathyroid, breast, scrotum, penis.

Subscript "e": Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy.

Subscript "f": Includes imaging for guidance of transrectal biopsy.

Subscript "g": Includes imaging for guidance of transvaginal biopsy.

Subscript "h": Includes imaging for guidance of trans-perineal biopsy.

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Concurrence of CDRH, Office of Device Evaluation (ODE)

David A. Lyon

(Division Sign-Off)
Division of Reproductive, Abdominal, ~~ENT,~~ e
and Radiological Devices

510(k) Number: K032503

DIAGNOSTIC ULTRASOUND INDICATIONS FOR USE FORM

System: EUB-5500
Transducer: EUP-OL334

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation						
General (Track I only)	Specific (Tracks I & III)	B	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)
Ophthalmic	Ophthalmic							
Fetal Imaging & Other	Fetal							
	Abdominal							
	Intra-operative (Spec.)							
	Intra-operative (Neuro.)							
	Laparoscopic	N	N	N		N	N	N
	Pediatric							
	Small Organ (Spec.)							
	Neonatal Cephalic							
	Adult Cephalic							
	Trans-rectal							
	Trans-vaginal							
	Trans-urethral							
	Trans-esoph. (non-Card.)							
	Musculo-skel. (Convent.)							
	Musculo-skel. (Superfic.)							
	Intra-luminal							
	Other (spec.)							
Cardiac	Cardiac Adult							
	Cardiac Pediatric							
	Trans-esophageal (card.)							
	Other (spec.)							
Peripheral Vessel	Peripheral vessel							
	Other (spec.)							

N = new indication.
*Combination of each operating mode, B, M, PWD, CWD and Color Doppler.
**Amplitude Doppler and 3D Imaging.

Additional Comments:

Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
Subscript "b": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures (including amniocentesis).
Subscript "c": Includes imaging of organs and structures exposed during surgery (excluding neurosurgery and laparoscopic procedures).
Subscript "d": Includes thyroid, parathyroid, breast, scrotum, penis.
Subscript "e": Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy.
Subscript "f": Includes imaging for guidance of transrectal biopsy.
Subscript "g": Includes imaging for guidance of transvaginal biopsy.
Subscript "h": Includes imaging for guidance of trans-perineal biopsy.

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Concurrence of CDRH, Office of Device Evaluation (ODE)

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510(k) Number: K032503

DIAGNOSTIC ULTRASOUND INDICATIONS FOR USE FORM

System: EUB-5500
Transducer: EUP-R54A-19

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation						
General (Track I only)	Specific (Tracks I & III)	B	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)
Ophthalmic	Ophthalmic							
Fetal Imaging & Other	Fetal							
	Abdominal							
	Intra-operative (Spec.)							
	Intra-operative (Neuro.)							
	Laparoscopic							
	Pediatric							
	Small Organ (Spec.)							
	Neonatal Cephalic							
	Adult Cephalic							
	Trans-rectal	N	N	N		N	N	N
	Trans-vaginal							
	Trans-urethral							
	Trans-esoph. (non-Card.)							
	Musculo-skel. (Convent.)							
	Musculo-skel. (Superfic.)							
	Intra-luminal							
	Other (spec.)							
Cardiac	Cardiac Adult							
	Cardiac Pediatric							
	Trans-esophageal (card.)							
	Other (spec.)							
Peripheral Vessel	Peripheral vessel							
	Other (spec.)							

N = new indication.
*Combination of each operating mode, B, M, PWD, CWD and Color Doppler.
**Amplitude Doppler and 3D Imaging.

Additional Comments:

Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
Subscript "b": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures (including amniocentesis).
Subscript "c": Includes imaging of organs and structures exposed during surgery (excluding neurosurgery and laparoscopic procedures).
Subscript "d": Includes thyroid, parathyroid, breast, scrotum, penis.
Subscript "e": Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy.
Subscript "f": Includes imaging for guidance of transrectal biopsy.
Subscript "g": Includes imaging for guidance of transvaginal biopsy.
Subscript "h": Includes imaging for guidance of trans-perineal biopsy.

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510(k) Number: K032503

DIAGNOSTIC ULTRASOUND INDICATIONS FOR USE FORM

System: EUB-5500
Transducer: EUP-S50

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation						
General (Track I only)	Specific (Tracks I & III)	B	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)
Ophthalmic	Ophthalmic							
Fetal Imaging & Other	Fetal	N	N	N	N	N	N	N
	Abdominal	N	N	N	N	N	N	N
	Intra-operative (Spec.)							
	Intra-operative (Neuro.)							
	Laparoscopic							
	Pediatric	N	N	N	N	N	N	N
	Small Organ (Spec.)							
	Neonatal Cephalic							
	Adult Cephalic	N	N	N	N	N	N	N
	Trans-rectal							
	Trans-vaginal							
	Trans-urethral							
	Trans-esoph. (non-Card.)							
	Musculo-skel. (Convent.)							
	Musculo-skel. (Superfic.)							
	Intra-luminal							
	Other (spec.)							
Cardiac	Cardiac Adult	N	N	N	N	N	N	N
	Cardiac Pediatric	N	N	N	N	N	N	N
	Trans-esophageal (card.)							
	Other (spec.)							
Peripheral Vessel	Peripheral vessel	N	N	N	N	N	N	N
	Other (spec.)							

N = new indication.
*Combination of each operating mode, B, M, PWD, CWD and Color Doppler.
**Amplitude Doppler, Harmonic Imaging and 3D Imaging.

Additional Comments:

Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
Subscript "b": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures (including amniocentesis).
Subscript "c": Includes imaging of organs and structures exposed during surgery (excluding neurosurgery and laparoscopic procedures).
Subscript "d": Includes thyroid, parathyroid, breast, scrotum, penis.
Subscript "e": Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy.
Subscript "f": Includes imaging for guidance of transrectal biopsy.
Subscript "g": Includes imaging for guidance of transvaginal biopsy.
Subscript "h": Includes imaging for guidance of trans-perineal biopsy.

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510(k) Number: K032503

DIAGNOSTIC ULTRASOUND INDICATIONS FOR USE FORM

System: EUB-5500
Transducer: EUP-TC3

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation						
General (Track I only)	Specific (Tracks I & III)	B	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)
Ophthalmic	Ophthalmic							
Fetal Imaging & Other	Fetal							
	Abdominal							
	Intra-operative (Spec.)							
	Intra-operative (Neuro.)							
	Laparoscopic							
	Pediatric							
	Small Organ (Spec.)							
	Neonatal Cephalic							
	Adult Cephalic							
	Trans-rectal							
	Trans-vaginal							
	Trans-urethral							
	Trans-esoph. (non-Card.)							
	Musculo-skel. (Convent.)							
	Musculo-skel. (Superfic.)							
	Intra-luminal							
	Other (spec.)							
Cardiac	Cardiac Adult				N			
	Cardiac Pediatric				N			
	Trans-esophageal (card.)							
	Other (spec.)							
Peripheral Vessel	Peripheral vessel				N			
	Other (spec.)							

N = new indication.
*Combination of each operating mode, B, M, PWD, CWD and Color Doppler.
**Amplitude Doppler.

Additional Comments:

Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
Subscript "b": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures (including amniocentesis).
Subscript "c": Includes imaging of organs and structures exposed during surgery (excluding neurosurgery and laparoscopic procedures).
Subscript "d": Includes thyroid, parathyroid, breast, scrotum, penis.
Subscript "e": Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy.
Subscript "f": Includes imaging for guidance of transrectal biopsy.
Subscript "g": Includes imaging for guidance of transvaginal biopsy.
Subscript "h": Includes imaging for guidance of trans-perineal biopsy.

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Concurrence of CDRH, Office of Device Evaluation (ODE)

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510(k) Number: K032503

DIAGNOSTIC ULTRASOUND INDICATIONS FOR USE FORM

System: EUB-5500
Transducer: EUP-U533

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation						
General (Track I only)	Specific (Tracks I & III)	B	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)
Ophthalmic	Ophthalmic							
Fetal Imaging & Other	Fetal							
	Abdominal							
	Intra-operative (Spec.)							
	Intra-operative (Neuro.)							
	Laparoscopic							
	Pediatric							
	Small Organ (Spec.)							
	Neonatal Cephalic							
	Adult Cephalic							
	Trans-rectal	Nh	Nh	Nh		Nh	Nh	Nh
	Trans-vaginal							
	Trans-urethral							
	Trans-esoph. (non-Card.)							
	Musculo-skel. (Convent.)							
	Musculo-skel. (Superfic.)							
	Intra-luminal							
	Other (spec.)							
Cardiac	Cardiac Adult							
	Cardiac Pediatric							
	Trans-esophageal (card.)							
	Other (spec.)							
Peripheral Vessel	Peripheral vessel							
	Other (spec.)							

N = new indication.
*Combination of each operating mode, B, M, PWD, CWD and Color Doppler.
**Amplitude Doppler and 3D Imaging.

Additional Comments:

Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
Subscript "b": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures (including amniocentesis).
Subscript "c": Includes imaging of organs and structures exposed during surgery (excluding neurosurgery and laparoscopic procedures).
Subscript "d": Includes thyroid, parathyroid, breast, scrotum, penis.
Subscript "e": Includes thyroid, parathyroid, breast, scrotum, penis and imaging for guidance of biopsy.
Subscript "f": Includes imaging for guidance of transrectal biopsy.
Subscript "g": Includes imaging for guidance of transvaginal biopsy.
Subscript "h": Includes imaging for guidance of trans-perineal biopsy.

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510(k) Number: K032503

DIAGNOSTIC ULTRASOUND INDICATIONS FOR USE FORM

System: EUB-5500
Transducer: EUP-V53W

Intended use: Diagnostic ultrasound imaging or fluid flow analysis if the human body as follows:

Clinical Application		Mode of Operation						
General (Track I only)	Specific (Tracks I & III)	B	M	PWD	CWD	Color Doppler	Combined* (Spec.)	Other** (Spec.)
Ophthalmic	Ophthalmic							
Fetal Imaging & Other	Fetal	N	N	N		N	N	N
	Abdominal							
	Intra-operative (Spec.)							
	Intra-operative (Neuro.)							
	Laparoscopic							
	Pediatric							
	Small Organ (Spec.)							
	Neonatal Cephalic							
	Adult Cephalic							
	Trans-rectal	Nf	Nf	Nf		Nf	Nf	Nf
	Trans-vaginal	Ng	Ng	Ng		Ng	Ng	Ng
	Trans-urethral							
	Trans-esoph. (non-Card.)							
	Musculo-skel. (Convent.)							
	Musculo-skel. (Superfic.)							
	Intra-luminal							
	Other (spec.)							
Cardiac	Cardiac Adult							
	Cardiac Pediatric							
	Trans-esophageal (card.)							
	Other (spec.)							
Peripheral Vessel	Peripheral vessel							
	Other (spec.)							

N = new indication.
*Combination of each operating mode, B, M, PWD, CWD and Color Doppler.
**Amplitude Doppler and 3D Imaging.

Additional Comments:
Subscript "a": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures
Subscript "b": Includes imaging for guidance of percutaneous biopsy of abdominal organs and structures (including amniocentesis).
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Subscript "g": Includes imaging for guidance of transvaginal biopsy.
Subscript "h": Includes imaging for guidance of trans-perineal biopsy.

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510(k) Number: K032503